



Prevention Research Center for Healthy Neighborhoods
at Case Western Reserve University

2014 Cuyahoga County Youth Risk Behavior Survey: Obesity and Weight Control

Introduction

The Prevention Research Center for Healthy Neighborhoods (PRCHN) at Case Western Reserve University has administered the Youth Risk Behavior Survey (YRBS) in school districts throughout Cuyahoga County since 2000. The YRBS is a cross-sectional tool developed by the Centers for Disease Control and Prevention (CDC) to track adolescent risk behavior over time. In spring of 2014, the PRCHN conducted the YRBS among 7th and 8th grade students in Cuyahoga County middle schools. A more detailed description of the methodology is available at our website, <http://prchn.org/yrbs.aspx>.

This brief report presents results from the 2014 Cuyahoga County Middle School Youth Risk Behavior Survey, with a particular focus on Obesity & Weight Control. In this brief report, we present:

- [Healthy People 2020](#)
- [Overall Prevalence](#)
- [Regional Prevalence](#)
- [Demographic Prevalence](#)
- [Trend Report](#)

Data for similar behaviors can be found at our website, <http://prchn.org/yrbs.aspx>

Obesity and Weight Control

Obesity has reached epidemic proportions. In the past 20 years, the prevalence of obesity has increased by more than 60% among adults and tripled in children and adolescents.ⁱ Overweight adolescents often become overweight adults with an increased risk for a wide variety of poor health outcomes including diabetes, stroke, heart disease, arthritis and certain cancers.^{ii, iii} Obesity during adolescence is associated with negative psychological and social consequences and health problems such as type 2 diabetes, obstructive sleep apnea, hypertension, dyslipidemia, and metabolic syndrome.^{iv}

Obese was defined as a BMI of $\geq 95^{\text{th}}$ percentile for age and sex. Overweight was defined as a BMI of $\geq 85^{\text{th}}$ percentile and $< 95^{\text{th}}$ percentile for age and sex. Normal weight was defined as a BMI of $\geq 5^{\text{th}}$ percentile and $< 85^{\text{th}}$ percentile for age and sex. Underweight was defined as a BMI of $< 5^{\text{th}}$ percentile for age and sex. It is important to note that BMI is calculated using self-reported height and weight and, therefore, may underestimate the actual prevalence of overweight and obese.

Healthy People 2020

Where possible, the Cuyahoga County Youth Risk Behavior Survey (YRBS) data are compared to the Healthy People 2020 benchmarks.^v This allows us to consider Cuyahoga County's progress towards the 10-year national objectives aimed at improving the health of all Americans.

Healthy People 2020 Objectives	Cuyahoga County 2014
NWS-10.3: Reduce the proportion of adolescents aged 12 to 19 years who are considered obese to no more than 16.1%	11.8% of Cuyahoga County middle school students were considered obese.

Overall Prevalence

The following table summarizes obesity and weight control among the 12,607 middle school students who completed the 2014 Cuyahoga County YRBS. Prevalence estimates and 95% confidence intervals were computed for all variables.

Risk Behavior	% (95% Confidence Interval)
Obese (Having a BMI of >95 th percentile for age and sex. Calculated from self-reported height and weight, adjusted for sex and age.)	11.8% (11.2-12.5)
Overweight (Having a BMI >85 th percentile and <95 th percentile for age and sex. Calculated from self-reported height and weight, adjusted for sex and age.)	17.3% (16.6-18.1)
Describes self as slightly or very overweight	26.2% (25.4-27.0)
Trying to lose weight	42.6% (41.3-43.8)

Regional Prevalence

The table below represents obesity and weight control by the six regions of Cuyahoga County. This division was conducted to provide a geographic representation of the prevalence of different risk behaviors in Cuyahoga County. In 2014, we were able to weight to 5 of 6 regions in Cuyahoga County. The column under Outer Ring-West does not include data because school participation within this region was insufficient to permit weighting.

Risk Behavior	CMSD-East % (95% CI)	CMSD-West % (95% CI)	Inner Ring-East % (95% CI)	Inner Ring-West % (95% CI)	Outer Ring-East % (95% CI)	Outer Ring-West % (95% CI)
Obese (Having a BMI of >95 th percentile for age and sex. Calculated from self-reported height and weight, adjusted for sex and age.)	16.8% (14.3-19.5)	18.1% (16.1-20.3)	15.1% (13.6-16.7)	11.9% (9.9-14.3)	8.7% (6.9-11.0)	N/A
Overweight (Having a BMI >85 th percentile and <95 th percentile for age and sex. Calculated from self-reported height and weight, adjusted for sex and age.)	22.8% (20.7-25.0)	20.6% (18.6-22.8)	19.7% (18.0-21.6)	18.4% (15.9-21.2)	13.7% (11.5-16.3)	N/A
Describes self as slightly or very overweight	21.9% (19.7-24.2)	27.8% (25.3-30.4)	24.9% (23.3-26.6)	33.4% (30.7-36.2)	23.8% (21.6-26.0)	N/A
Trying to lose weight	39.5% (36.7-42.4)	46.2% (43.0-49.3)	41.3% (39.3-43.2)	46.4% (44.0-48.8)	37.3% (35.0-39.8)	N/A

Demographic Prevalence

The tables below allow for further comparisons of obesity and weight control between demographic groups. Data are presented by gender, race/ethnicity, and grade level. A statistically significant difference exists between groups if the 95% confidence intervals do not overlap.

Obese		
Category	%	CI
Gender		
Female	9.6	8.7- 10.5
Male	13.7	12.8- 14.7
Race/Ethnicity		
White	8.5	7.7- 9.2
Black	16.7	15.4- 18.1
Hispanic	16.7	13.9- 20.0
Other/Multiple	9.7	7.2- 12.8
Grade		
7th	11.3	10.3- 12.4
8th	12.2	11.2- 13.3
Total	11.8	11.2- 12.5

Overweight		
Category	%	CI
Gender		
Female	17.3	16.3- 18.4
Male	17.3	16.3- 18.4
Race/Ethnicity		
White	14.5	13.5- 15.5
Black	21.6	20.3- 23.0
Hispanic	20.3	17.7- 23.2
Other/Multiple	14.8	12.5- 17.5
Grade		
7th	16.7	15.6- 17.9
8th	17.9	16.8- 19.1
Total	17.3	16.6- 18.1

Describes self as slightly or very overweight			
Category	%	CI	
Gender			
Female	30.8	29.5-	32.1
Male	22.1	21.1-	23.2
Race/Ethnicity			
White	27.1	26.0-	28.3
Black	24.5	23.2-	25.9
Hispanic	27.5	24.8-	30.4
Other/Multiple	23.7	20.9-	26.7
Grade			
7th	24.8	23.6-	25.9
8th	27.5	26.3-	28.8
Total	26.2	25.4-	27.0

Trying to lose weight			
Category	%	CI	
Gender			
Female	50.8	49.5-	52.2
Male	31.6	30.5-	32.7
Race/Ethnicity			
White	39.2	38.1-	40.3
Black	42.1	40.6-	43.6
Hispanic	45.9	42.9-	48.9
Other/Multiple	35.2	32.1-	38.5
Grade			
7th	39.7	38.5-	41.0
8th	41.8	40.5-	43.2
Total	40.7	39.8-	41.6

Cuyahoga County Trend Data

The following table presents the prevalence of obesity and weight control among Cuyahoga County middle school students in 2008, 2010, 2012 and 2014. The prevalence for each year is given (when available), with 95% confidence intervals below.¹

Cuyahoga County, 2008	Cuyahoga County, 2010	Cuyahoga County, 2012	Cuyahoga County, 2014
Obese (BMI of >95 th percentile for age and sex. Based on self-reported height and weight, adjusted for sex and age.)			
13.7% (12.7-14.6)	12.0% (11.0-13.1)	12.6% (11.4-13.7)	11.8% (11.2-12.5)
Overweight (BMI >85 th percentile and <95 th percentile for age and sex. Based on self-reported height and weight, adjusted for sex and age.)			
19.9% (18.8-20.9)	17.9% (16.6-19.1)	16.4% (15.4-17.4)	17.3% (16.6-18.1)
Describes self as slightly or very overweight			
24.9% (23.6-26.3)	24.6% (23.5-25.7)	23.9% (22.8-25.0)	26.2% (25.4-27.0)
Trying to lose weight			
39.2% (38.0-40.4)	39.9% (38.6-41.3)	38.6% (37.4-39.9)	40.7% (39.8-41.6)

¹ The YRBS questions with two or more data points over 2008-2014 are included. The new 2014 questions are not included for the purpose of demonstrating trends. For those questions not asked in 2014, refer to the PRCHN archives at www.prchn.org/aspx for more detailed information.

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ⁱ National Center for Health Statistics. Prevalence of Overweight among Children and Adolescents: United States, 1999-2002. National Center for Health Statistics Web site. Available at <http://www.cdc.gov/nchs/products/pubs/pubd/hestats/overwght99.htm>. Accessed July 24, 2008.

ⁱⁱ Ferraro, K., Thorpe, R., Wilkinson, J. 2003. The life course of severe obesity: Does childhood overweight matter? *Journal of Gerontology*. 58B(2):S110-S119.

ⁱⁱⁱ Mokdad, A., Ford, E., Bowman, B., et al. 2003. Prevalence of obesity, diabetes, and obesity-related health risk factors, 2001. *Journal of the American Medical Association*. 289(1):76-79.

^{iv} Freedman, D., Khan, L., Serdula, M., Dietz, W., Srinivasan, S., Berenson, G. 2005. The relation of childhood BMI to adult adiposity: The Bogalusa Heart Study. *Pediatrics*. 115(1):22-27.

^v U.S. Department of Health and Human Services. *Nutrition and Weight Status*. Retrieved from 2020 Topics & Objectives: <http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=40>